

December 22, 2000

Exemption No. 7411
Regulatory Docket No. 29013

Mr. W. D. Hospers
President
Vintage Flying Museum
P.O. Box 820099
Fort Worth, TX 76182

Dear Mr. Hospers:

This is in response to your February 1, 2000, letter petitioning the Federal Aviation Administration (FAA) on behalf of the Vintage Flying Museum (VFM) for an extension of Exemption No. 6775. That exemption from Section 91.315, 119.5(g), and 119.21(a) of Title 14, Code of Federal Regulations (14 CFR) permits VFM to operate its former military Boeing B-17G (B-17G) aircraft, which is certificated in the limited category, for the purpose of carrying passengers on local flights in return for receiving donations, subject to certain conditions and limitation. Because Exemption No. 6775 has expired, the FAA is processing your request as a new petition for exemption.

In Grant of Exemption Nos. 6540, 6541, and 6565, upon which Exemption No. 6775 (copy enclosed) was based, the FAA found that preserving historic U.S. aircraft is in the public interest, in the same manner that preserving historic buildings, landmarks, and neighborhoods has been determined to be in the public interest. While aviation history can be represented with static displays in museums in the same manner that historic landmarks can be represented in museums, the public has shown a willingness to support the preservation and operation of World War II vintage airplanes and a desire to experience flights in these historic airplanes.

The FAA also recognized that the only way to maintain vintage World War II airplanes in an operational status is to accept financial contributions to defray the high costs of maintaining those aircraft. In return, paying members of the public have the opportunity to experience a local flight in an historic aircraft. Without these contributions, it is reasonable to conclude that operators of these aircraft would not be able to raise sufficient funds to maintain the aircraft and provide flying experiences to the public.

The FAA noted that individuals who choose to accept a flight experience in these airplanes differ from the general traveling public. These passengers support the continued operation of

historic airplanes through a substantial monetary donation. Many of these passengers are familiar with the airplane's military history and are aware that it is not a standard category aircraft. Unlike passengers who purchase tickets on an aircraft used for airline travel solely for transportation, these passengers are specifically seeking the experience of flying in historic airplanes.

The FAA finds that the operation of former military aircraft raises significant safety issues, such as life-limited parts and aircraft design. Additionally, the FAA has determined that all flight crewmembers are required to meet stringent qualifications and training requirements. Therefore, certain conditions and limitations have been included in this and previously issued exemptions to standardize the maintenance and inspection of the B-17G aircraft when it is operated under the authority of this exemption and to ensure Vintage is maintaining highly skilled and qualified pilots to operate its airplane.

In your petition, you indicate that the conditions and reasons regarding public interest and safety, presented in your original petition remain unchanged.

In consideration of the foregoing, I find that a grant of exemption is in the public interest. Therefore, pursuant to the authority contained in 49 U.S.C. Sections 40113 and 44701, delegated to me by the Administrator, the Vintage Flying Museum is granted an exemption from 14 CFR Sections 91.315, 119.5(g), and 119.21(a) to the extent necessary to operate its former military B-17G aircraft, which is certificated in the limited category, for the purpose of carrying passengers on local flights in return for receiving donations. This exemption is subject to the following conditions and limitations, which have been revised since your original grant of exemption to be consistent with more recent grants of exemption::

1. Vintage Flying Museum must maintain its B-17 aircraft in accordance with the -

- a. Maintenance requirements as specified in its B-17 type specification sheet, as amended;
- b. FAA-approved maintenance inspection program that meets the requirements of Section 91.409(f)(4) and (g); and
- c. B-17 military technical manuals.

2. The PIC must -

- a. Hold at least a commercial pilot certificate with a multiengine airplane rating, an airplane instrument rating, and a B-17 type rating;

b. Have completed within the previous 12 calendar months, Vintage Flying Museum's PIC qualification and recurrent flight and ground training program in the B-17 for which PIC privileges are sought;

c. Have completed within the previous 12 calendar months, Vintage Flying Museum's PIC proficiency check in the B-17 for which PIC privileges are sought;

d. Have at least a total of 2,500 hours of aeronautical flight experience, 1,000 hours of aeronautical flight experience in multiengine airplanes, and 25 hours in a B-17; or have at least a total of 1,000 hours of aeronautical flight experience, 200 hours of aeronautical flight experience in multiengine airplanes, and 100 hours and 50 takeoffs and 50 landings in a B-17; and

d. Have accomplished within the previous 90 days, three takeoffs and three landings to a full stop in a B-17 for which PIC privileges are sought. For initial PIC qualification in a B-17 or if the pilot has allowed his takeoff and landing currency to lapse in a B-17 the takeoff and landing currency may not be accomplished during passenger carrying operations.

3. The SIC must -

a. Hold at least a commercial pilot certificate with a multiengine airplane rating and an airplane instrument rating;

b. Have completed within the previous 12 calendar months, Vintage Flying Museum's SIC qualification and recurrent flight and ground training program in a B-17 for which SIC privileges are sought;

c. Have completed within the previous 12 calendar months, Vintage Flying Museum's SIC proficiency check in a B-17 for which SIC privileges are sought;

d. Have at least a total of 1,500 hours of aeronautical flight experience, 250 hours of aeronautical flight experience in multiengine airplanes; or have at least a total of 500 hours of aeronautical flight experience, 100 hours of aeronautical flight experience in multiengine airplanes, and 25 hours and 10 takeoffs and 10 landings in a B-17; and

e. Have accomplished within the previous 90 days, three takeoffs and three landings to a full stop in a B-17 for which SIC privileges are sought. For initial SIC qualification in a B-17 or if the pilot has allowed his takeoff and landing currency to lapse in a B-17 the takeoff and landing currency may not be accomplished during passenger carrying operations.

4. Vintage Flying Museum must develop and maintain a written B-17 qualification and recurrent ground training program for its

PICs and SICs that covers the training subjects listed below. Each PIC and SIC must receive the following training and iterations of training within the previous 12 calendar months prior to serving in an PIC or SIC position in a B-17 for Vintage Flying Museum:

REQUIRED TRAINING TASKS	ITERATIONS
a. General information and description of the airplane;	1
b. Aircraft limitations;	1
c. Aircraft servicing;	1
d. Airspeeds;	1
e. Fuel system;	1
f. Electrical system;	1
g. Hydraulic system;	1
h. Engines;	1
i. Instruments and avionics;	1
j. Landing gear, brakes, controls, and flaps systems;	1
k. Propeller;	1
l. Emergency procedures, including -	1
(i) Instruction in emergency assignments and procedures, including coordination among crewmembers;	1
(ii) Individual instruction in the location, function, and operation of emergency equipment, including -	1
A. First aid equipment and its proper use; and	1
B. Portable fire extinguishers, with emphasis on the type of extinguisher to be used on different classes of fires;	1
(iii) Instruction in the handling of emergency situations, including -	1

A. Fire in flight or on the surface and smoke control procedures with emphasis on electrical equipment and related circuit breakers found in cabin areas; and	1
B. Illness, injury, or other abnormal situations involving passengers or crewmembers;	1
m. Weight and balance;	1
n. Performance planning; and	1
o. Airplane's checklist.	1

5. Vintage Flying Museum must develop and maintain a written B-17 qualification and recurrent flight training program for its PICs that covers the areas of operations, tasks, and iterations as listed in the following table of training tasks. Each PIC must successfully accomplish this training before being assigned PIC responsibilities and duties. Each PIC must receive and successfully accomplish the following training and iterations of training within the previous 12 calendar months prior to serving in an PIC position in a B-17 for Vintage Flying Museum:

REQUIRED TRAINING TASKS	ITERATIONS
a. Preflight Preparation	1
(i) Aircraft exam (oral or written)	1
(ii) Aircraft performance & limitations (oral or written)	1
b. Ground Operations	4
(i) Preflight inspection	4
(ii) Cockpit resource management	4
(iii) Powerplant start procedures	4
(iv) Taxiing	4
(v) Pre-takeoff checks	4
c. Takeoffs & Departures	3
(i) Normal & crosswind takeoffs	3 within the previous

	90 days	
(ii) Powerplant failure	3	
(iii) Rejected takeoffs	3	
d. Inflight Maneuvers	4	
(i) Steep turns	4	
(ii) Approach to stalls	4	
(iii) Powerplant failure	4	
(iv) Specific flight characteristics	4	
e. Landings & Approaches to Landing	3	
(i) Normal & crosswind approaches & landing	3 within the previous 90 days	
(ii) Maneuvering to a landing with a simulated powerplant failure	3	
(iii) Rejected landing	3	
(iv) Landing from a no flap or a nonstandard flap approach	3	
f. Normal & Abnormal Procedures	3	
(i) Powerplant	3	
(ii) Fuel system	3	
(iii) Electrical system	3	
(iv) Hydraulic system	3	
(v) Environmental & pressurization system (as appropriate and if equipped)	3	
(vi) Fire detection & extinguishing system	3	
(vii) Navigation & avionics system	3	
(viii) Automatic flight control system, electronic flight instrument system, & related systems (as appropriate and if equipped)	3	
(ix) Flight Control System	3	

(x) Anti-ice & de-ice System	3	3	3
(xi) Aircraft & personal emergency equipment	3	3	3
g. Emergency Procedures	3	2	3
(i) Inflight fire & smoke removal	3	2	3
(ii) Rapid decompression (as appropriate and if equipped with a pressurization system)	3	2	3
(iii) Emergency descent	3	2	3
(iv) Ditching	3	2	3
(v) Emergency Evacuation	3	2	3
h. Postflight Procedures	3		3
(i) After landing procedures	3	4	3
(ii) Parking and securing aircraft	3	4	3

6. Vintage Flying Museum must develop and maintain a written B-17 qualification and recurrent flight training program for its SICs that covers the areas of operations, tasks, and iterations as listed in the following table of training tasks. Each SIC must successfully accomplish this training before being assigned SIC responsibilities and duties. Each SIC must receive and successfully accomplish the following training and iterations of training within the previous 12 calendar months prior to serving in an SIC position in a B-17 for Vintage Flying Museum:

REQUIRED TRAINING TASKS	3	ITERATIONS	3
a. Operational procedures applicable to the powerplant, equipment, and systems.	3	1	3
b. Performance specifications and limitations.	3	1	3
c. Normal, abnormal, and emergency operating procedures.	3	1	3
d. Three takeoffs and three landings to a full stop as the sole manipulator of the flight controls.	3	3 in the previous 90 days	3
e. Engine-out procedures and maneuvering with an engine out while executing the duties of PIC.	3	1	3
f. Crew resource management training.	3	1	3

3	3	3
3	g. Familiarization with the aircraft flight	3 1 3
3	3 manual, placards, and markings.	3 3
3	3	3 3

7. Each PIC must successfully accomplish a proficiency practical test upon completion of the initial qualification training program and upon completion of the recurrent training program (every 12 calendar months after completion of the initial and recurrent qualification training program). The proficiency practical test must cover the areas of operations and tasks listed below in the following "REQUIRED TESTING TASKS" table. Each PIC must be found competent and proficient by the FAA's Ft. Worth SW FSDO No. 19, Alliance Airport, 2260 Alliance Blvd., Suite 400, Ft. Worth, Texas; 76177-4300; (817) 491-5000 (or by a procedure that has been approved by the Ft. Worth FAA SO FSDO No. 19) on those areas of operation and tasks before being assigned PIC duties and responsibilities in a B-17 for Vintage Flying Museum:

3	REQUIRED TESTING TASKS	3	ITERATIONS	3
3		3		3
3		3		3
3	a. Preflight Preparation	3		3
3		3		3
3	(i) Aircraft exam (oral or written)	3	1	3
3		3		3
3	(ii) Aircraft performance & limitations	3	1	3
3	(oral or written)	3		3
3		3		3
3	b. Ground Operations	3		3
3		3		3
3	(i) Preflight inspection	3	1	3
3		3		3
3	(ii) Cockpit resource management	3	1	3
3		3		3
3	(iii) Powerplant start procedures	3	1	3
3		3		3
3	(iv) Taxiing	3	1	3
3		3		3
3	(v) Pre-takeoff checks	3	1	3
3		3		3
3	c. Takeoffs & Departures	3		3
3		3		3
3	(i) Normal & crosswind takeoffs	3	1	3
3		3		3
3	(ii) Powerplant failure	3	1	3
3		3		3
3	(iii) Rejected takeoffs	3	1	3
3		3		3
3	d. Inflight Maneuvers	3		3
3		3		3
3	(i) Steep turns	3	1	3

3	3	3
3	(ii) Approach to stalls	3 1 3
3		3 3
3	(iii) Powerplant failure	3 1 3
3		3 3
3	(iv) Specific flight characteristics	3 1 3
3		3 3
3	e. Landings & Approaches to Landing	3 3
3		3 3
3	(i) Normal & crosswind approaches & landing	3 1 3
3		3 3
3	(ii) Maneuvering to a landing with a simulated powerplant failure	3 1 3
3		3 3
3	(iii) Rejected landing	3 1 3
3		3 3
3	(iv) Landing from a no flap or a nonstandard flap approach	3 1 3
3		3 3
3	f. Normal & Abnormal Procedures	3 3
3		3 3
3	(i) Powerplant	3 1 3
3		3 3
3	(ii) Fuel system	3 1 3
3		3 3
3	(iii) Electrical system	3 1 3
3		3 3
3	(iv) Hydraulic system	3 1 3
3		3 3
3	(v) Environmental & pressurization system (as appropriate and if equipped)	3 1 3
3		3 3
3	(vi) Fire detection & extinguishing system	3 1 3
3		3 3
3	(vii) Navigation & avionics system	3 1 3
3		3 3
3	(viii) Automatic flight control system, electronic flight instrument system, & related systems (as appropriate and if equipped)	3 1 3
3		3 3
3	(ix) Flight Control System	3 1 3
3		3 3
3	(x) Anti-ice & de-ice System	3 1 3
3		3 3
3	(xi) Aircraft & personal emergency equipment	3 1 3
3		3 3
3	g. Emergency Procedures	3 3
3		3 3
3	(i) Inflight fire & smoke removal	3 1 3
3		3 3
3	(ii) Rapid decompression (as appropriate and if equipped with a pressurization system)	3 1 3
3		3 3

3	(iii) Emergency descent	3	1	3
3		3		3
3	(iv) Ditching	3	1	3
3		3		3
3	(v) Emergency Evacuation	3	1	3
3		3		3
3	h. Postflight Procedures	3		3
3		3		3
3	(i) After landing procedures	3	1	3
3		3		3
3	(ii) Parking and securing aircraft	3	1	3
3		3		3

8. Each SIC must accomplish a proficiency practical test upon completion of the initial qualification training program and upon completion of the recurrent training program (every 12 calendar months after completion of the initial and recurrent qualification training program). The proficiency practical test must cover the areas of operations and tasks listed in the following "REQUIRED TESTING TASKS" table. Each SIC must be found competent and proficient by the Ft. Worth FAA SO FSDO No. 19 (or by a procedure that has been approved by the Ft. Worth FAA SO FSDO No. 19) on those areas of operation and tasks before being assigned SIC duties and responsibilities in a B-17 for Vintage Flying Museum:

3	REQUIRED TESTING TASKS	3	ITERATIONS	3
3		3		3
3		3		3
3	a. Operational procedures applicable to the	3	1	3
3	powerplant, equipment, and systems.	3		3
3		3		3
3	b. Performance specifications and limitations.	3	1	3
3		3		3
3	c. Normal, abnormal, and emergency operating	3	1	3
3	procedures.	3		3
3		3		3
3	d. Three takeoffs and three landings to a full	3	1	3
3	stop as the sole manipulator of the flight	3		3
3	controls.	3		3
3		3		3
3	e. Engine-out procedures and maneuvering with	3	1	3
3	an engine out while executing the duties of PIC.	3		3
3		3		3
3	f. Crew resource management training.	3	1	3
3		3		3
3	g. Familiarization with the aircraft flight	3	1	3
3	manual, placards, and markings.	3		3
3		3		3

9. Vintage Flying Museum must document and record all ground and flight training and/or testing required by this grant of exemption in a manner acceptable to the FAA's Ft. Worth FAA SO

FSDO No. 19. That documentation and records must contain the following information:

- a. Date of each training session.
- b. Date of each testing session.
- c. The amount of time of each session of ground and flight training given.
- d. The amount of time of each session of ground and flight testing given.
- e. Location where each session of ground and flight training was given.
- f. Location where each session of ground and flight testing was given.
- g. The aircraft identification number in which each flight training session was received in.
- h. The aircraft identification number in which each flight testing session was received in.
- i. The name and certificate number of the pilot who provided each session of training.
- j. The name and certificate number of the pilot who provided each session of testing.
- k. The signature and printed name of the pilot who received the training. That pilot's signature will serve as an verification of having received each session of training.
- l. The signature and printed name of the pilot who received the training. That pilot's signature will serve as an verification of having received each session of testing.

10. When requested, the Vintage Flying Museum's B-17 qualification and recurrent ground- and flight-training programs and/or records listed in condition Nos. 4, 5, 6, and 9, as appropriate, must be made available to the FAA's Ft. Worth SW FSDO No. 19, Alliance Airport, 2260 Alliance Blvd., Suite 400, Ft. Worth, Texas; 76177-4300; (817) 491-5000.

11. Vintage Flying Museum must have the services of an FAA-certificated airframe and powerplant mechanic or an appropriately rated repair station available at all stopovers to perform all required maintenance inspections and repairs.

12. Vintage Flying Museum will maintain the following information and records and will make those records available for review to the FAA when requested:

a. The name of each pilot crewmember Vintage Flying Museum authorizes to conduct flight operations in its airplanes under the terms of this exemption;

b. Copies of each PIC's and SIC's pilot certificate, medical certificate, qualifications, and initial and recurrent training and testing documentation to comply with Condition Nos. 2, 3, 7, 8, and 9; and

c. Records of maintenance performed and maintenance inspection records to comply with Condition No. 1.

13. Vintage Flying Museum shall notify the FAA's Ft. Worth SW FSDO No. 19 within 24 hours of any of the following occurrences by written report, by electronic mail, or by facsimile:

a. Each in flight fire in any system or area that requires activation of any fire suppression system or discharge of a portable fire extinguisher.

b. Each exhaust system component failure including the turbocharger components that causes damage to any engine, structure, cowling, or components.

c. Each aircraft component or system that causes, during flight, accumulation or circulation of noxious fumes, smoke, or vapor in any portion of the cabin or crew area.

d. Except for training, each occurrence of engine shutdown or propeller feathering, and the reason for such shutdown or feathering.

e. Each failure of the propeller governing systems or feathering systems.

f. Any landing gear system or component failures or malfunctions which require use of emergency or standby extension systems.

g. Each failure or malfunction of the wheel brake systems that cause loss of brake control on the ground.

h. Each aircraft structure that requires major repair due to damage, deformation, or corrosion, and the method of repair.

i. Each failure or malfunction, of the fuel system, tanks, pumps, or valves.

j. Each malfunction, failure, or defect in any system or component that requires taking emergency action of any type during the course of any flight.

k. For the purpose of this section, "during flight" means the

period from the moment the aircraft leaves the surface of the earth on takeoff until it touches down on landing.

14. Before permitting a person to be carried on board its airplane for the purposes authorized under this exemption, Vintage Flying Museum will inform that person that its airplanes hold a limited airworthiness certificate or experimental airworthiness certificate, as appropriate; the significance of the airworthiness certificate as compared to a standard airworthiness certificate; and that the FAA has authorized this flight under a grant of exemption from the requirements of Sections 91.315, 119.5(g), and 119.21(a). The explanation of the significance of a limited airworthiness certificate or experimental airworthiness certificate, as appropriate, compared to a standard airworthiness certificate must include at least the following information:

a. The FAA has not established nor has it approved limited category airworthiness certificated aircraft manufacturing standards. In contrast, standard category airworthiness certificated aircraft are manufactured to FAA-approved standards, including standards addressing the design of the aircraft and life-limited parts.

b. Limited category airworthiness certificated aircraft are issued when the FAA finds the aircraft -

(i) Has been previously issued a limited category type certificate and the aircraft conforms to that type certificate; and

(ii) To be in a good state of preservation and repair and is in a safe operating condition.

c. Standard category airworthiness certificates are issued for an aircraft when the FAA finds the -

(i) Aircraft has been built and maintained in accordance with that aircraft's type certification standards as established by the FAA; and

(ii) Aircraft's inspection and maintenance requirements are in compliance with the applicable Federal Regulations.

15. All flight operations must be conducted -

a. At a minimum operating altitude of not less than 1,000 feet above the ground (AGL);

b. Between the hours of official sunrise and sunset, as established in the American Air Almanac, as converted to local time;

c. With a minimum flight visibility of not less than 5

statute miles;

- d. With a minimum ceiling of not less than 2,000 feet AGL;
- e. Within a 50-nautical-mile radius of the departure airport with landing only permitted at that departure airport; and
- f. At an airport that has a fire station or fire-fighting services available or within close proximity of the airport.

16. No persons other than the assigned flight crewmembers may be permitted on the flight deck of the airplane during flight operations.

17. Except for essential crewmembers, all flight operations must carry no more than the maximum number of passengers permitted by the aircraft's weight and balance limitations and number of approved seats in the aircraft.

18. Except for an emergency locator transmitter, Vintage Flying Museum's airplanes must have the equipment listed in Section 91.205(b), and that equipment must be in an operable condition during the flight.

19. If the airplane is to be operated overwater and beyond the power-off gliding distance from shore, Vintage Flying Museum's airplanes must have the equipment listed in Section 91.205(b)(11), and that equipment must be in an operable condition during the flight.

20. Vintage Flying Museum must hold and continue to hold a determination from the U.S. Internal Revenue Service that it is a Section 501(c)(3) nonprofit, tax-exempt, charitable organization under Sections 509(a)(1) and 170(b)(1)(A)(vi) of the Internal Revenue Code.

21. Vintage Flying Museum must notify the FAA's Ft. Worth SW FSDO No. 19, Alliance Airport, 2260 Alliance Blvd., Suite 400, Ft. Worth, Texas; 76177-4300; (817) 491-5000 at least 5 working days (Mondays through Fridays) before conducting any PIC or SIC initial or recurrent qualification training and any PIC or SIC initial or recurrent proficiency checks required to be conducted under the terms of this grant of exemption.

22. No later than 72 hours prior to commencing flight operations under the terms of this grant of exemption, Vintage Flying Museum must notify the jurisdictional FAA Flight Standards District Office where they intend to conduct the flight operations and shall provide a copy of this exemption to that jurisdictional FAA Flight Standards District Office.

23. Failure to comply with any of the conditions and limitations of this grant of exemption will be grounds for the immediate suspension or revocation of this exemption.

This grant of exemption terminates on December 31, 2002, unless sooner superseded or rescinded.

Sincerely,

/s/ L. Nicholas Lacey
Director, Flight Standards Service

Enclosure